



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street

San Francisco, CA 94105-3901

APR 23 2008

Pamela Creedon, P.E.
Executive Officer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Dear Ms. Creedon:

Thank you for the opportunity to comment on the Proposed Basin Plan Amendment, Draft Staff Report for the Control of Methylmercury and Total Mercury in the Delta Estuary, and the Draft Delta Estuary TMDL for Methylmercury, dated February 2008. We support the Central Valley Regional Water Quality Control Board's (the Board's) efforts and urge the Board to adopt the new water quality objectives and TMDLs at the scheduled adoption hearing in July. Our comments on the draft package are summarized below, and detailed comments are included in the attachment.

We strongly support your decision to complete TMDLs for methylmercury in the Delta Estuary. These TMDLs use the best available science, and focus on controlling both methylmercury, which is directly linked to methylmercury fish tissue levels, and total mercury, which is a limiting factor for the production of methylmercury. Previous TMDLs for Cache Creek, Bear Creek and Harley Gulch adopted by the Regional Board have also focused on controlling both methylmercury and total mercury. The science supporting these TMDLs clearly indicates that controlling both methyl and total mercury will more effectively reduce fish tissue values to safe levels for both wildlife and Delta anglers, than controlling only total mercury.

We also strongly support the Board in its decision to complete TMDLs for the Delta Estuary prior to completing TMDLs for upstream waters. Fishing in the Delta is an important use to be addressed as quickly as possible, and will help drive the calculations for the tributary TMDLs to follow. We support your strategy of determining the reductions of methylmercury and total mercury necessary for the Delta to achieve safe fish tissue levels, before proceeding upstream, to complete the TMDLs for the waterbodies that flow into the Delta Estuary.

We understand some stakeholders prefer load and wasteload allocations that focus on total mercury. The draft Basin Plan Amendment proposes to limit both methylmercury and total mercury. We support your approach of limiting methylmercury discharges at current performance on a concentration basis as interim limits, prior to attainment of a water quality-based effluent limit. We would support interim numeric mass-based or concentration-based, methyl and/or total mercury limits, as long as they are designed to hold the discharger at current performance levels or below. At a minimum, we believe dischargers should be held to current loading in impaired waters, so as not to further exacerbate the problem.

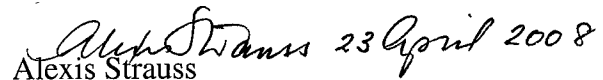
The proposed Basin Plan Amendment discusses pilot offset projects during Phase 1 and the development of a permanent offset program during Phase 2. We support this approach. We believe it is important to take advantage of opportunities to gain early reductions of methylmercury and total mercury in the Delta. Although establishing these programs is likely to be complex, we are committed to working with Board staff and other interested stakeholders to facilitate completion of any pilot projects and a permanent Phase 2 offset program.

The proposed Basin Plan Amendment includes three new methylmercury fish tissue objectives. We support the addition of these objectives and commend your staff on the excellent analytical work supporting them. The new objectives protect both wildlife and human health. The objectives protect threatened and endangered species, as well as Delta anglers who consume 32 grams per day or 8 ounces (one meal) per week of larger fish. The values are appropriate and consistent with the San Francisco Bay Mercury TMDL.

As a formality, the positions described in this letter and the attachment are preliminary in nature and do not constitute a determination by EPA under Clean Water Act 303(c) or 303(d). Approval/disapproval decisions will be made by EPA following adoption of the water quality standards and the TMDLs, and submittal to EPA.

We appreciate the great deal of work that has gone into the development of the Proposed Basin Plan Amendment and supporting documents. We appreciate the opportunity to review and comment. If you have any questions, please contact me at (415) 972-3572, or if your staff have any questions, please have them contact Diane Fleck at (415) 972-3480.

Sincerely yours,


Alexis Strauss
Director, Water Division

Attachment

U.S. EPA COMMENTS

I. PROPOSED BASIN PLAN AMENDMENT (BPA) TO CONTROL METHYL AND TOTAL MERCURY IN THE SACRAMENTO-SAN JOAQUIN DELTA ESTUARY, FEBRUARY 2008

1. Modifications to Chapter II (Existing and Potential Beneficial Uses)

- a. The COMM beneficial use is proposed as a potential use. EPA supports adding COMM as a use, although it is not entirely clear why it is being added as a potential use rather than an existing use. Although EPA regulations do not use the term “potential use,” such a designation is clearly contemplated by EPA regulations when a state determines that a use should not be considered an “existing use.” (“Designated uses are those uses specified in water quality standards for each water body or segment whether or not they are being attained.” 40 CFR 131.3(f)).

Our understanding is that commercial fishing is actually happening in the Delta, but the relevant water quality objectives are not being achieved. In this situation, EPA believes the State has the discretion to add COMM as a potential beneficial use, rather than an existing use. However, it appears that the State may also have the discretion to consider COMM an existing use, and we recommend more discussion of why it is not considered an existing use. For example, the Staff Report indicates that COMM is considered potential rather than existing because the recommended fish tissue objectives are not being achieved in all parts of the Delta; however, the Staff Report also indicates that REC-1 recreational fishing is currently designated an existing use, although the water body is impaired as to that use. We recommend that staff explain why COMM is considered a potential use when REC-1 is considered an existing use. At a minimum, in those segments where the recommended fish tissue objectives are being achieved, and commercial fishing is actually occurring, COMM should be considered an existing use. See Advanced Notice of Proposed Rulemaking, 63 Fed Reg 36754 (“EPA’s current interpretation is that the existing use should be identified either where the use has taken place or the water quality sufficient to support the use has existed since November 28, 1975, or both”) and also discussion of situations in which a use is occurring but water is impaired, 63 Fed. Reg. 36753.

- b. In the introduction to Appendix 43 on page BPA-21, we suggest clarifying that the proposed COMM use will apply to the waterways listed in Table A43-1, in addition to the proposed methylmercury fish tissue objectives, the implementation program, and the monitoring provisions.

2. Modifications to Chapter III (Water Quality Objectives)

- a. We strongly support the Regional Board’s proposed fish tissue objectives of: 0.24 mg methylmercury/kg and 0.08 mg methylmercury/kg, wet weight, in muscle of

TL3 and TL4 fish, respectively (150 – 500 mm total length), for the protection of human health and wildlife that consume large fish; and 0.03 mg methylmercury/kg, wet weight, in whole fish less than 50 mm in length, for the protection of wildlife that consume small fish. This set of objectives is protective of people who eat 32 g/day (one 8 ounce meal per week) of commonly eaten, legal sized fish, and it is protective of wildlife species that consume both large and small fish, including several federally listed threatened and endangered species. This human health consumption rate is consistent with the San Francisco Bay Mercury TMDL, consistent with the consumption rate used by OEHHA to develop fish advisories, and reflects local angler habits.

3. Modifications to Chapter IV (Implementation/Delta Mercury Control Program)

- a. TMDLs/Loading Capacity: The proposed BPA contains a detailed discussion of the allocations and wasteload allocations, and Tables A, B, D, F, and G contain methylmercury load or wasteload allocations by category for: agriculture and wetlands; municipal and industrial wastewater; MS4 dischargers; open waters; and tributary watersheds, respectively. However, the TMDL Staff Report divides the Delta into 8 subareas, and assimilative capacity is calculated for each subarea (see Table 8.2, page 155). In the TMDL Staff Report, load and wasteload allocations are assigned to each subarea, with the total load not exceeding the assimilative capacity of each subarea (see Tables 8.4a through 8.4g, pages 162 – 167). The TMDLs, or loading capacity for each subarea, must be included in the BPA (Table 8.2 from the TMDL Staff Report). We recommend that you include Tables 8.4a through 8.4g from the TMDL Staff Report, in the BPA, to clearly show the loading capacity for each subarea, as well as the load and wasteload allocations assigned to each source, for each subarea.
- b. TMDL Elements: The proposed BPA does not clearly include a summary of: the numeric targets used in the TMDL analyses; the source analyses for methylmercury and mercury; and the linkage analysis between the sources, targets, loads and allocations. The BPA needs to contain a summary of this information, or the BPA needs to reference the TMDL Staff Report which contains this information.
- c. Compliance Schedules: The proposed BPA discusses compliance schedules in NPDES permits to implement the final WLAs for this TMDL. We are pleased to see the language at the bottom of page BPA-2 stating that compliance schedules must be “as short as possible and must be consistent with the requirements of the Clean Water Act, EPA regulations at 40 CFR 122.46, and the State law and regulations.” (However, the cite should be to 40 CFR 122.47, not 122.46.) However, some of the other language in the draft BPA that appears to pertain to compliance schedules is confusing and we recommend it be deleted or changed. The language on page BPA-1, third paragraph under “Delta Mercury Control Program,” could be read to set a minimum length of time for compliance

schedules, which is inconsistent with the “as soon as possible” requirement. Additionally, the last two paragraphs on the bottom of BPA-6 are confusing. It is unclear why concentration limits based on current performance should not be effective until three years after the date of the permit, and why an additional compliance schedule of up to ten years would be necessary. Phase 1, performance-based concentration limits, should be in place as soon as such limits can be calculated. The purpose of a compliance schedule is to give a discharger time to implement measures to control methylmercury in order to meet the water quality-based effluent limit (WQBEL). It is not appropriate to use a compliance schedule to implement limits based on current performance, where no new measures would be needed.

It is unclear whether Board staff intends to allow compliance schedules for new dischargers (see Table B, footnote j). 40 CFR 122.47(a)(2) places restrictions on which NPDES permits for new facilities may contain compliance schedule provisions. We recommend you review the regulation to ensure your provision is consistent with it.

Lastly, the provision on page BPA-15 appears to allow a discharger to extend its schedule past 2030 if it has accrued adequate credits under the proposed offset program. This provision appears to conflict with the clear language on page BPA-2, which allows compliance schedules only up to 2030. Additionally, it is not clear that allowing an additional five years in this circumstance would meet the requirement that the limit be met “as soon as possible.”

The State Water Resources Control Board’s statewide compliance schedule policy was adopted on April 15. We urge the Regional Board staff to take a close look at the compliance schedule scheme proposed in this TMDL, to clarify any confusion or inconsistencies, and to ensure that this proposal is consistent with the State Policy and with Federal regulations.

- d. Reasonable Assurances: The proposed BPA at Table B, Municipal and Industrial Methylmercury Allocations, includes an allocation for each subarea for new discharges, to account for population growth. The TMDL Staff Report, at pages 155 through 158, under section 8.1.2, Allocation Strategy, states that “...staff recommends that the tributary inputs be assigned percent allocations based on a methylmercury concentration of 0.05 ng/l (rather than 0.06 ng/l) ... Such an allocation... would ensure that assimilative capacity is reserved for ... point source discharges within the Delta/Yolo Bypass...”

Before approving a TMDL in which some of the load reductions are allocated to nonpoint sources in lieu of additional load reductions allocated to point sources, there must be specific reasonable assurances that the nonpoint source reductions will in fact occur. 40 CFR 130.2(i). It is necessary for the Board to explain and demonstrate in greater detail in this TMDL package, how the necessary reductions from the tributaries are reasonably expected by the Board to be achievable and to

occur within a reasonable timeframe. We note that the reductions from the Cache Creek Settling Basin Outflow are specifically delineated in the BPA (page BPA-12), and specific timeframes are included. We recommend including a schedule for completing the remaining tributary TMDLs from which reductions are needed and expected to occur.

- e. Offset Pilot Project and Offset Program: The proposed BPA discusses pilot offset projects during Phase 1, and the development of a more permanent offset program during Phase 2. We support this approach because we believe it is important to take advantage of opportunities to gain early reductions of total mercury and methylmercury in the Delta. Although establishing such programs is likely to be complex, we are committed to working with Board staff and other interested stakeholders to facilitate completion of pilot projects and a permanent offset program.

However, we are concerned about extending compliance schedules for facilities that earn credits in the pilot program (see comment c. above). We believe it may be more appropriate for a facility to use credits earned in a pilot offset project, toward meeting effluent limits that are effective in 2030. The amount of credits available for use by the facility should be established as part of the agreement from the proposed pilot project.

- f. NPDES Permit Limits: We support the inclusion of Phase 1 methylmercury concentration limits as interim limits for NPDES dischargers, as included in the proposed BPA, prior to attainment of final wasteload allocations and corresponding final water quality-based effluent limitations (WQBELs). Interim limits to be used during the compliance schedule period, may be mass-based or concentration-based. Interim, numeric, performance-based limits should be calculated to ensure that dischargers are held to current loadings or below. Under the Clean Water Act and EPA regulations at 40 CFR 122.47, compliance schedules must include enforceable interim requirements leading to compliance with a final WQBEL. At a minimum, we believe dischargers should be held to current loadings in impaired waters, so as not to further exacerbate the problem. Additionally, it is our understanding that the state compliance schedule policy will require numeric interim limits when compliance schedules exceed one year.
- g. Phased Implementation: We support the implementation strategy which includes two phases. We agree that it is appropriate in the first implementation phase to focus on developing Characterization and Control studies to evaluate methyl and total mercury concentrations and loads in source waters, receiving water and discharges; identify variables that control methylmercury production; and develop and design feasible control options. Actual implementation of load reduction measures would follow in Phase 2.

The Staff Report anticipates several steps to improve the science and body of knowledge around methylmercury production and management, including setting

up a Technical Advisory Committee (TAC) to review and inform the development of the Characterization and Control Studies required by the various stakeholder groups. We agree the Board should use these available regulatory tools. The Board may find additional opportunities for science-based design projects and monitoring projects, such as wetlands restoration projects, by working with the CALFED Science Program and the Delta Regional Ecosystem Restoration Implementation Plan.

- h. Delta TMDL and Tributary TMDLs: We strongly support the decision to complete TMDLs for the Delta Estuary prior to completing TMDLs for upstream waters. Fishing in the Delta is an important use to be addressed as quickly as possible, and will help drive the calculations for the tributary TMDLs to follow. We support the strategy of determining the reductions of methylmercury and total mercury necessary for the Delta to achieve safe fish tissue levels, before proceeding upstream, to complete the TMDLs for the waterbodies that flow into the Delta Estuary.

Completing the TMDL for the Delta is timely, given the imminent changes in the Delta that may exacerbate methylmercury production and exposure. The Board's schedule for addressing CWA 303(d) listed waterbodies anticipates working on TMDLs for some upstream areas concurrently with Phase 1. The 2006 CWA 303(d) list indicates that staff will work in 2008 and 2009 on TMDLs for the Feather River and portions of the American River. We support this approach. However, we note that although the San Joaquin watershed contributes significant methylmercury loads to the Delta, there does not appear to be any near-term work on mercury TMDLs for this region. Mud Slough has been documented as a source based on recent studies (C.G. Foe and S.M. Louie, "Methyl Mercury Concentrations and Loads in the Central Valley," 2006, CALFED funding) but is not listed as impaired for mercury. Future changes in the management of water entering and moving through the Delta (changes that may alter salinity, dissolved oxygen, and other factors affecting mercury cycling) could alter net methylmercury production within the Delta. The Board and other agencies will need to evaluate the consequences of proposed actions for which it has oversight. We encourage the Board to move forward with monitoring and characterization studies to improve information on mercury inputs and other water quality parameters in the San Joaquin watershed.

- i. Technical Advisory Committee (TAC): We support the formation of a TAC to review the study designs, evaluate results, and make recommendations on the proposed management practices contained in the Characterization and Control Studies. We recommend you consider drawing on the expertise of the CALFED Science Program and Independent Science Board in developing the TAC and defining its charge. EPA staff will continue to work with Board staff on determining whether EPA resources are available to assist with this effort.

- j. Risk Management Program: We strongly support the Risk Management component of the implementation strategy, in which the Regional Board will work with public health agencies to reduce human exposure through consumption of contaminated fish. The Fish Mercury Project, a major inter-agency collaboration funded through the CALFED Program, has included education and outreach to ethnic communities engaged in subsistence and recreational fishing. These public health programs are needed as long as we have elevated mercury levels in sport fish.

4. Modifications to Chapter V (Surveillance and Monitoring):

Fish Methylmercury Compliance Monitoring: The BPA proposes that the Regional Board will initiate fish tissue monitoring five years after dischargers implement projects to reduce methylmercury and total mercury discharges, and compliance monitoring will take place every ten years thereafter, at one location within each subarea. We urge more frequent compliance monitoring, such as compliance monitoring on a 5 year basis, and, where significant changes in methyl or total mercury concentrations or loading are occurring, on a yearly basis. Changes in methylmercury levels in fish can vary on a yearly basis. Compliance monitoring on a 10 year basis would not allow the Board to determine whether changes in the strategy are necessary, in a timely manner.

We commend the State Board and the San Francisco and Central Valley Regional Board staff for working to develop a comprehensive Delta-wide monitoring program as part of a strategic workplan for the Delta. This initiative has our full support. We expect that the TMDL monitoring will be folded into the broader monitoring program.

II. STAFF REPORT: SACRAMENTO-SAN JOAQUIN DELTA ESTUARY TMDL FOR METHYLMERCURY, FEBRUARY 2008

1. Methylmercury: We strongly support the decision to complete TMDLs for methylmercury in the Delta Estuary. These TMDLs use the best available science and focus on controlling both methylmercury, which is directly linked to methylmercury fish tissue levels, and total mercury, which is a limiting factor for production of methylmercury. Previous TMDLs for Cache Creek, Bear Creek and Harley Gulch adopted by the Regional Board have also focused on controlling both methylmercury and total mercury. The science supporting these TMDLs clearly indicates that controlling both methyl and total mercury will more effectively reduce fish tissue values to safe levels for both wildlife and Delta anglers, than controlling only total mercury.

The Staff Report explains that controlling methylmercury will be more effective to reduce fish tissue values, than regulating total mercury. Although mercury is widely distributed within the watershed, the most significant sources of

methylmercury are associated with processes which result in net methylmercury production. Subareas with equal inputs of mercury may have quite different rates of methylmercury production. We know from research and practice (e.g., through various CALFED-funded studies) that a number of the factors controlling methylmercury production are anthropogenic and/or are subject to manipulation. Improving our ability to attenuate or avoid methylmercury production in key areas (e.g., existing or potential hot spots) is more promising than a less targeted approach. Various expected changes in the Delta such as water conveyance projects and restoration of wetlands and floodplains, could significantly affect methylmercury levels and are important reasons to focus on better understanding and managing the mercury in this environment.

2. Source Analysis, Numeric Targets, Linkage Analysis, TMDL and Loading Capacity, and Allocations: We commend staff on their excellent analytical work. The source analyses for methylmercury and total mercury are well-developed and thorough. The numeric targets, which are the proposed fish tissue objectives, are reasonable and appropriate; they protect Delta anglers as well as threatened and endangered wildlife. The linkage analysis reflects exceptional, cutting-edge science. The TMDL and loading capacity analyses, and the load and wasteload allocations are reasonable. The Margin of Safety, Seasonal Variation and Critical Conditions analyses are appropriate. The TMDL document is thorough and sound; it reflects extraordinary work.